

# THE HEALTH OF RHODE ISLAND'S HOSPITALS (2001)

*~ A Financial Analysis ~*



Health Quality Performance Measurement

RHODE ISLAND DEPARTMENT OF HEALTH

***“The Health of RI’s Hospitals (2001)”***

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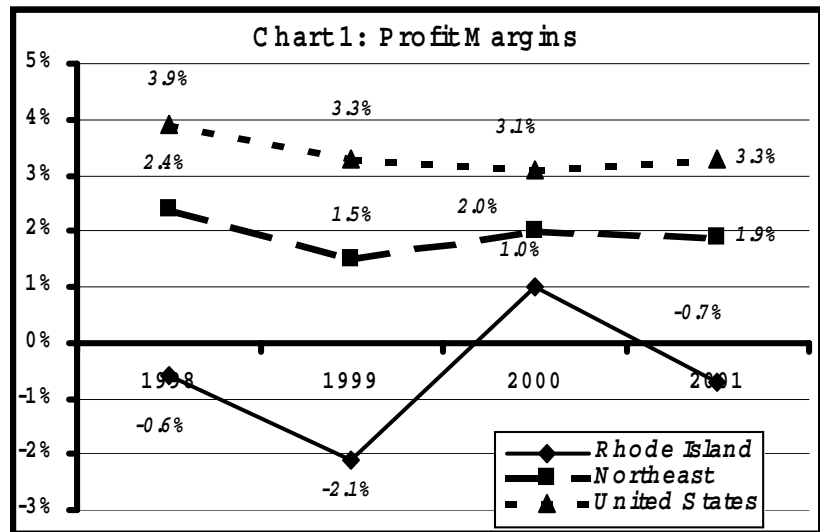
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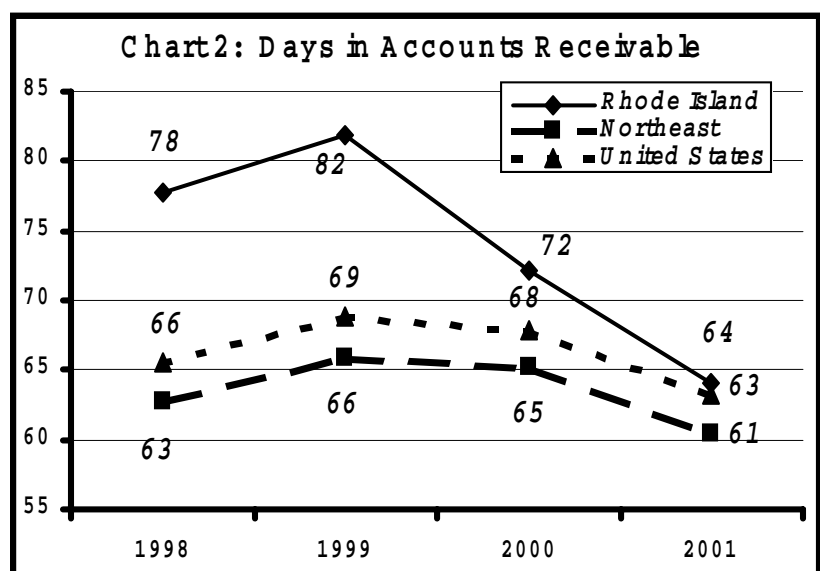
## I: Executive Summary

Rhode Island's 14 community hospitals are a \$1.8 billion dollar industry comprising almost 8 percent of the Gross State Product. The hospitals employ over 16,000 full time equivalents with a payroll approaching \$900 million. In addition, they invest more than \$87 million annually in new capital (construction and equipment). Because of their importance to healthcare delivery, their impact on the economy, and the large public investment they represent, the Department of Health (HEALTH) maintains a Database<sup>1</sup> to evaluate their operations. This Report compares the financial performance of RI hospitals to others across the country and ranks the individual facilities in the state.

**Profitability** measures examine the generation of net income, the return on investment and the creation of wealth. Profitability is important to a hospital's long-term survival because it provides the means to replace aging plants and to invest in new technologies. Average RI profit margins trailed both the regional and national benchmarks to a significant extent each year (Chart 1). Statewide margins were also negative for three of the four years. In addition to losing money, RI hospitals also lost more net worth (i.e., net assets or equity) than their national or regional counterparts.

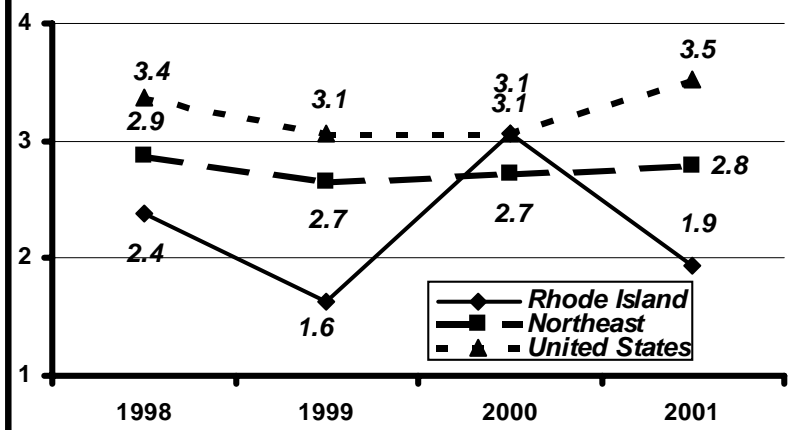


**Liquidity** measures assess the ability of a hospital to pay its short-term obligations. Deterioration in liquidity usually indicates cash flow problems when an organization experiences financial difficulty. On average, RI hospitals greatly improved their liquidity by increasing cash balances and steadily reigning in receivables. Retained cash (i.e., *Days Cash on Hand*) was consistent with the national experience and the time bills were outstanding (i.e., *Days in Accounts Receivable*) was only slightly above the national and regional benchmarks (Chart 2).



<sup>1</sup> The Hospital Financial Operations Dataset ([www.HEALTH.ri.gov](http://www.HEALTH.ri.gov))

Chart 3: Debt Service Coverage



both the national and regional rates in 2001 (Chart 3).

**Asset Efficiency** measures how productively a hospital uses its assets to generate revenue. Higher values indicate a more efficient use of resources, all else being equal. The *Fixed Asset Turnover* measures the number of dollars generated from each dollar invested in property, plant and equipment. Statewide values were consistently and favorably above both the regional and national amounts (Chart 4).

Chart 4: Fixed Asset Turnovers

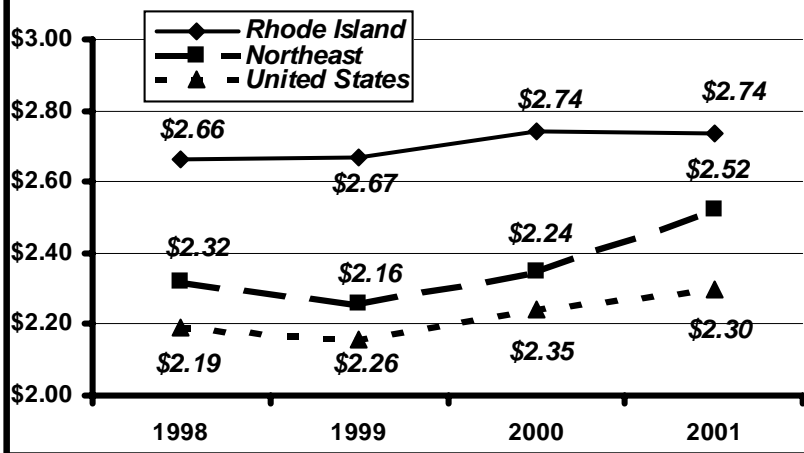
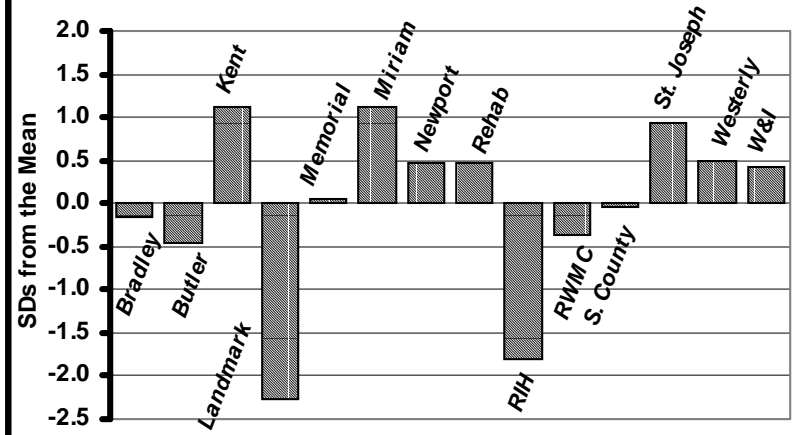


Chart 5: Overall Performance Indices



**Capital Structure** measures define the importance of debt in financing the hospital, the cost of the investment in fixed assets, and the ability to borrow additional monies. The state's hospital system was not highly leveraged, but it had a compromised capacity to secure additional financing because of low profitability. The ability to pay back the debt (i.e., the *Debt Service Coverage*) improved to match the national experience in 2000, but fell below

This Report also compares individual hospitals in the state, using an aggregate index of 11 individual ratios over four years (Chart 5). **Miriam, Kent and St. Joseph** showed the strongest overall financial performance, while **Landmark, RIH, and Butler** exhibited the weakest overall financial performance, respectively.

## II. Introduction

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The technique of ratio analysis has been used for years by investors, financiers and managers to assess the performance of businesses, including hospitals. The *Health of Rhode Island's Hospitals (2001)* uses that tool to present the first updated financial analysis of the State's hospital industry since 1990. It compares RI hospitals' performance over time (1998-2001), and to regional and national norms. In addition, it ranks the individual hospitals based on their overall financial performance. The primary data sources were the audited financial statements for RI's 14 community hospitals and comparable regional and national information came from the *Almanac of Hospital Financial & Operating Indicators*.<sup>2</sup>

The following suggestions should help improve the Report's utility for all users:

- This Report examines financial operations only. It does not include information on clinical outcomes or patient satisfaction, both of which are additional aspects of overall performance. See [www.healthri.org/chic/performance/home.htm](http://www.healthri.org/chic/performance/home.htm) for publications on these issues.
- All community hospitals are evaluated, including acute-care, specialty, teaching, non-teaching, network, and independent facilities, regardless of size. Hypothetically, financial performance is independent of categorization (i.e., any hospital in the same market area has equal opportunity to perform equally well on any financial measure). Therefore, further classification into smaller and smaller sub-groups is not productive with only 14 hospitals in the state.
- Aggregate statewide comparisons express generalities of overall performance. With every conclusion, however, there are individual hospital exceptions. For example, RI's 2000 *Total Margin* profitability was lower than the national and regional values, but Newport, Miriam, Memorial, and Bradley each performed better than these benchmarks.
- The individual hospital analyses measure each hospital's performance against all the hospitals in the state, not to regional or national benchmarks. Favorable trends are for higher values on the indices. To interpret any of the standardized indices, one concludes that the index value is so many standard deviations from the mean (i.e., the average for all hospitals).<sup>3</sup>
- The ranking of hospitals necessarily involves some subjectivity (i.e., the individual measures are chosen and relative weights are assigned). However, the methodology adopted here is a modification of the same one used in HEALTH's previous Reports and a defensible rationale is provided for each decision. In addition, multiple years (4) are now included to remove vagaries associated with single year's reporting.

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<sup>2</sup> 2003 Ed., Errata Sheet, Ingenix, Inc. 1-800-765-6588

<sup>3</sup> see Appendix -Methods

### III. Profitability

**Profitability** measures examine the generation of net income, the return on investment and the creation of wealth. Profitability is key to a hospital's long-term survival because philanthropy alone is an uncertain and inappropriate source of primary operating revenue. Hospitals that are consistently unprofitable will have insufficient funds to meet current requirements, to replace aging plants or to invest in new equipment. Three profitability statistics are presented: *Total Margin*, *Return on Equity*, and *Equity Growth Rates* (Table 1).

**TABLE 1: PROFITABILITY MEASURES**

	<b>-1- Total Margin</b>				<b>-2- Return on Equity</b>				<b>-3- Equity Growth Rates</b>			
	'98	'99	'00	'01	'98	'99	'00	'01	'98	'99	'00	'01
Bradley	-9%	-7%	4%	3%	-6%	-5%	3%	3%	-3%	5%	12%	-13%
Butler	-1%	-1%	-11%	-1%	-1%	-2%	-15%	-1%	1%	2%	-9%	-9%
Kent	-1%	-1%	3%	3%	-3%	-2%	7%	7%	-4%	3%	15%	-1%
Landmark	-2%	-2%	-16%	-7%	-6%	-6%	-88%	-82%	-15%	-8%	-47%	-53%
Memorial	2%	2%	5%	0%	3%	3%	7%	0%	8%	7%	8%	-8%
Miriam	-1%	2%	5%	6%	-2%	3%	8%	13%	-1%	9%	13%	-5%
Newport	1%	-2%	7%	-1%	0%	-1%	2%	0%	3%	10%	7%	-3%
Rehab Hospital	-5%	-17%	-4%	0%	-10%	-33%	-111%	16%	-9%	-25%	-109%	11%
RIH	-3%	-5%	1%	-5%	-3%	-5%	1%	-6%	-6%	0%	5%	-18%
Roger Williams	1%	0%	1%	-2%	2%	0%	1%	-4%	3%	-2%	1%	-17%
South County	4%	-1%	-6%	-3%	10%	-1%	-13%	-7%	19%	10%	-3%	-1%
St. Joseph	1%	-2%	1%	1%	4%	-5%	2%	2%	6%	-1%	11%	-1%
Westerly	4%	4%	3%	1%	4%	3%	3%	1%	6%	8%	7%	-7%
W&I	2%	-4%	3%	2%	6%	-10%	7%	5%	12%	-8%	15%	1%
<b>Rhode Island:</b>	<b>-0.6%</b>	<b>-2.1%</b>	<b>1.0%</b>	<b>-0.7%</b>	<b>-0.8%</b>	<b>-2.7%</b>	<b>1.3%</b>	<b>-1.1%</b>	<b>-0.9%</b>	<b>2.4%</b>	<b>5.3%</b>	<b>-10.9%</b>
<b>Northeast:</b>	<b>2.4%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>1.9%</b>	<b>4.3%</b>	<b>3.1%</b>	<b>4.5%</b>	<b>3.7%</b>	<b>5.4%</b>	<b>4.8%</b>	<b>6.7%</b>	<b>1.2%</b>
<b>United States:</b>	<b>3.9%</b>	<b>3.3%</b>	<b>3.1%</b>	<b>3.3%</b>	<b>6.5%</b>	<b>5.4%</b>	<b>5.4%</b>	<b>6.0%</b>	<b>6.9%</b>	<b>6.0%</b>	<b>6.1%</b>	<b>5.4%</b>

-1- Bottom-line net income (profit) as a percentage of total revenue -higher values are preferred

-2- Net income (profit) as a percentage of the net assets (equity investment) used to produce that income -higher values are preferred

-3- Yearly percentage growth in net worth (net assets or equity) -higher values are preferred

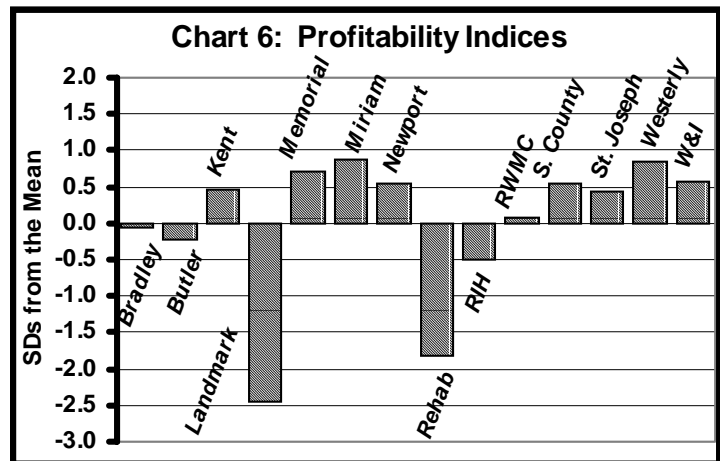
The *Total Margin* is the bottom-line profit from hospital operations and non-operations alike. It reflects all realized gains and losses for the year. Low hospital profitability is a chronic problem in RI. Statewide margins are consistently and significantly below both the national and regional benchmarks. In addition, with the exception of 2000, RI posted aggregate losses each year. Traditionally, lower comparative *Total Margin* values indicate poor expense management. However, the other variable often overlooked in the profitability equation is revenue (primarily patient reimbursement). A recent study of hospital costs<sup>4</sup> found RI had the 9<sup>th</sup> lowest reimbursement rates in the country, suggesting this was also a factor in RI's weak profitability (at least in 1999).

The *Return on Equity* measures net income as the return on the stakeholders' 'investment' in the hospital (i.e., the net assets or net worth of the hospital). In the case of non-profit hospitals, the stakeholders are essentially the community at large. The return, while not a cash dividend, is a reinvestment in the hospital as a public good and is measured by the net income produced. From an economic standpoint, if the *Return on Equity* is low compared to similar public investments, stakeholders may shift their philanthropy to other charities where the perceived return is higher. As expected given the low *Total Margins* in the state, the *Return on Equity* values also compared unfavorably to the national and regional benchmarks.

<sup>4</sup> "1999 Hospital Costs in Rhode Island –A State by State Comparison," Cryan B., RI Dept. of Health, Oct. 2001

The *Equity Growth Rates* measure what is happening to the net worth of a hospital, whether it is growing or shrinking. Ideally, healthy organizations are expected to increase in value over time. A combination of three factors may affect a hospital's *Equity Growth Rate*: net income (or losses), fundraising efforts, and market returns on the investments. Any loss in equity is undesirable. Technically, when net worth becomes negative, an organization is considered insolvent. RI's performance on this measure was unfavorable. In 1998 -2001, RI hospitals trailed their national and regional cohorts, and no facility in the state had positive growth rates in all 4 years.

The top three hospitals for overall profitability were: **Miriam**, **Westerly** and **Memorial**, respectively (Chart 6). Miriam was the most profitable hospital and had the 4<sup>th</sup> largest growth in equity.<sup>5</sup> Westerly had the 2<sup>nd</sup> highest profit margin and the 7<sup>th</sup> largest growth in equity. Memorial was the 3<sup>rd</sup> most profitable hospital, with the 6<sup>th</sup> largest growth in equity. The bottom three hospitals for profitability were: **Landmark**, **Rehab** and **RIH**, respectively.



<sup>5</sup> Hospital rankings on individual measures are based on the weighted average values (19% for 1998, 23% for 1999, 27% for 2000, 31% for 2001) on each measure except for Equity Growth Rate(s) which are compounded values for 1998-2001

## IV. Liquidity

**Liquidity** measures examine the ability of a hospital to meet its short-term obligations (i.e., to pay its bills), and the timing of cash-flows (both into and out of the facility). Most organizations experience a financial problem because of a liquidity crisis, and deterioration in these measures may presage future insolvency. Three liquidity statistics are examined: *Days Cash on Hand*, *Days in Patient Accounts Receivable*, and *Average Payment Period* (Table 2).

**TABLE 2: LIQUIDITY MEASURES**

	-4- <i>Days Cash on Hand</i>				-5- <i>Days in Patient A.R.</i>				-6- <i>Average Payment Period</i>			
	'98	'99	'00	'01	'98	'99	'00	'01	'98	'99	'00	'01
Bradley	9	6	8	8	95	130	87	101	33	38	49	61
Butler	53	18	37	51	89	89	69	69	113	81	108	131
Kent	18	25	43	40	58	59	58	62	74	83	96	88
Landmark	76	46	70	61	59	81	40	23	63	73	95	93
Memorial	0	1	1	1	94	90	106	104	73	68	84	86
Miriam	13	25	50	49	72	87	72	49	60	44	50	53
Newport	1	4	12	20	87	80	62	45	81	50	49	44
Rehab Hospital	20	39	11	17	82	77	70	51	54	93	86	74
RIH	3	8	17	7	89	93	77	66	101	62	62	49
Roger Williams	18	46	24	6	74	78	73	71	54	69	62	60
South County	83	63	60	32	64	81	77	69	71	54	62	74
St. Joseph	27	37	36	30	72	78	75	62	47	64	58	48
Westerly	26	24	20	18	55	48	51	48	71	71	65	63
W&I	18	16	39	33	78	73	68	66	75	83	97	95
<b>Rhode Island:</b>	<b>18.4</b>	<b>20.7</b>	<b>29.8</b>	<b>23.4</b>	<b>77.8</b>	<b>81.9</b>	<b>72.1</b>	<b>64.0</b>	<b>76.8</b>	<b>65.6</b>	<b>71.3</b>	<b>66.4</b>
<b>Northeast:</b>	<b>26.9</b>	<b>22.7</b>	<b>23.8</b>	<b>28.0</b>	<b>62.8</b>	<b>65.8</b>	<b>65.2</b>	<b>60.5</b>	<b>74.1</b>	<b>73.5</b>	<b>68.8</b>	<b>65.9</b>
<b>United States:</b>	<b>26.7</b>	<b>25.2</b>	<b>22.3</b>	<b>23.0</b>	<b>65.5</b>	<b>68.8</b>	<b>67.9</b>	<b>63.3</b>	<b>59.9</b>	<b>59.4</b>	<b>58.3</b>	<b>55.6</b>

-4- Number of average expense days the hospital maintains in cash and 'near-cash' -generally, higher values are preferred

-5- Average number of days patient accounts receivable are outstanding (uncollected) -lower values are preferred

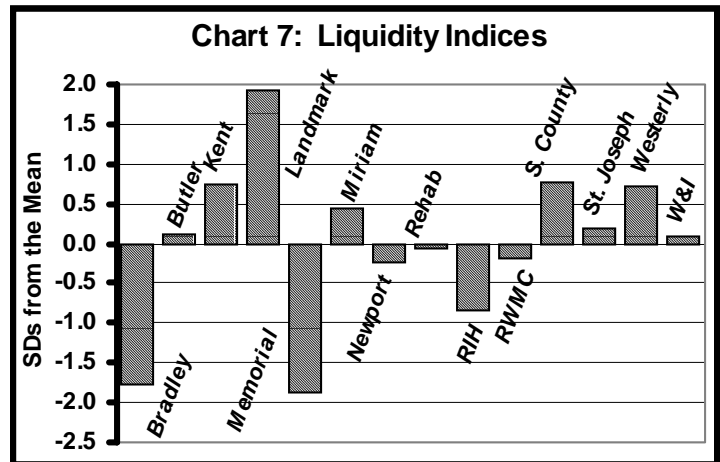
-6- Average number of days the hospital takes to pay its bills -generally, neither higher nor lower values are preferred

*Days Cash on Hand* is the number of days of average operating expenses the hospital maintains in highly liquid assets. It is a stringent measure of liquidity as it includes only assets that are, or readily convertible to cash, in the numerator. This measure is one in which higher values are generally preferred, but those values shouldn't be 'excessive'. Hospitals must strike a balance between maintaining enough cash for operations, but not so much as to affect profitability (i.e., *Total Margin*, *Return on Equity*). The return on short-term investments is generally less than that of monies invested longer, so there is an opportunity cost in maintaining liquidity. RI's early *Days Cash on Hand* values were less than the national and regional norms, however, that position has improved to approximate the national experience in 2001.

*Days in Patient Accounts Receivable* measures the average time receivables are outstanding. Patient care is the primary source of operating revenue, so prompt collection of bills is critical. Increases in this measure can create cash-flow problems that usually cause a hospital to extend its *Average Payment Period*. RI hospitals were slower than their national and regional counterparts in their collections, however, the trend has been favorably decreasing. Ideally, the *Days in Patient Accounts Receivable* should be less than the *Average Payment Period* or the hospital may need to fund its operations with a short-term loan. These borrowings are the most expensive type of credit, so they are the least desirable way to finance everyday working capital needs.

The *Average Payment Period* measures the number of days before current liabilities (i.e., bills and other immediate obligations) are paid. RI's *Average Payment Periods* were typically longer than the regional and national benchmarks (except in 1999). This is not unexpected given the relatively longer collection of receivables in the state. In fact, the timing of cash-flows was favorable in RI, with the exception of 1999 when revenue was received in 82 days and payments were made in 66 days. Generally, it is in a hospital's best interest to postpone payables as long as good vendor relations are maintained.

The top three hospitals for liquidity were: **Landmark**, **South County** and **Kent**, respectively (Chart 7). Landmark had the strongest cash position and the shortest collection period in the state. South County had the 2<sup>nd</sup> strongest cash position and the 9<sup>th</sup> shortest collection period, and Kent had the 5<sup>th</sup> strongest cash position and the 3<sup>rd</sup> shortest collection period in the state. The bottom three hospitals for liquidity were: **Memorial**, **Bradley** and **RIH**, respectively.



## V. Capital Structure

**Capital Structure** measures indicate the importance of debt in financing the hospital, the cost of the investment in fixed assets, and the ability to incur additional debt. These ratios are closely monitored by creditors and bond rating agencies and may ultimately determine the amount of borrowing available for future capital projects. Three statistics are presented: *Debt to Capitalization*, *Capital Expense Ratio*, and *Debt Service Coverage* (Table 3).

TABLE 3: CAPITAL STRUCTURE MEASURES												
	-7- <i>Debt to Capitalization</i>				-8- <i>Capital Expense Ratio</i>				-9- <i>Debt Service Coverage</i>			
	'98	'99	'00	'01	'98	'99	'00	'01	'98	'99	'00	'01
Bradley	0%	0%	0%	0%	2.9%	2.8%	2.6%	2.3%	n/a	n/a	n/a	n/a
Butler	11%	10%	9%	13%	4.0%	3.8%	3.8%	4.0%	2.1	2.0	-4.7	2.6
Kent	15%	17%	17%	16%	3.6%	4.0%	4.3%	4.0%	2.1	2.3	4.4	4.2
Landmark	44%	45%	60%	75%	5.4%	5.3%	5.7%	6.1%	1.2	1.2	-2.1	-0.1
Memorial	11%	10%	9%	9%	3.7%	4.1%	4.4%	4.2%	4.0	3.7	5.0	2.5
Miriam	31%	29%	26%	27%	5.7%	6.1%	6.2%	5.3%	3.2	4.3	6.3	8.0
Newport	0%	15%	13%	14%	5.5%	6.2%	6.7%	8.9%	21.3	4.3	16.2	3.2
Rehab Hospital	0%	0%	0%	-8%	3.1%	3.5%	1.2%	-0.2%	n/a	n/a	n/a	3.3
RIH	30%	27%	26%	30%	8.0%	8.7%	8.8%	7.1%	1.9	1.0	3.5	1.0
Roger Williams	23%	27%	26%	30%	5.7%	4.8%	5.0%	4.9%	2.5	2.2	2.3	1.1
South County	35%	42%	42%	34%	6.9%	6.7%	6.6%	7.0%	3.2	1.9	0.3	0.4
St. Joseph	16%	37%	35%	34%	3.2%	3.5%	3.3%	3.3%	1.8	2.0	4.9	4.2
Westerly	23%	21%	19%	18%	9.9%	9.7%	9.3%	8.4%	3.3	3.3	3.4	2.0
W&I	21%	18%	12%	6%	5.3%	5.0%	5.0%	4.5%	2.6	0.5	2.4	2.1
<b>Rhode Island:</b>	<b>22.8%</b>	<b>23.8%</b>	<b>22.3%</b>	<b>23.5%</b>	<b>5.9%</b>	<b>6.1%</b>	<b>6.2%</b>	<b>5.6%</b>	<b>2.4</b>	<b>1.6</b>	<b>3.1</b>	<b>1.9</b>
<b>Northeast:</b>	<b>32.9%</b>	<b>31.8%</b>	<b>32.9%</b>	<b>29.2%</b>	<b>7.4%</b>	<b>7.3%</b>	<b>7.1%</b>	<b>6.8%</b>	<b>2.9</b>	<b>2.7</b>	<b>2.7</b>	<b>2.8</b>
<b>United States:</b>	<b>26.8%</b>	<b>25.8%</b>	<b>26.4%</b>	<b>25.1%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.1%</b>	<b>6.9%</b>	<b>3.4</b>	<b>3.1</b>	<b>3.1</b>	<b>3.5</b>

-7- Percentage of long-term-debt in the total capitalization of the hospital -lower values are preferred

-8- Percentage of capital-related fixed costs to total expenses -lower values are preferred

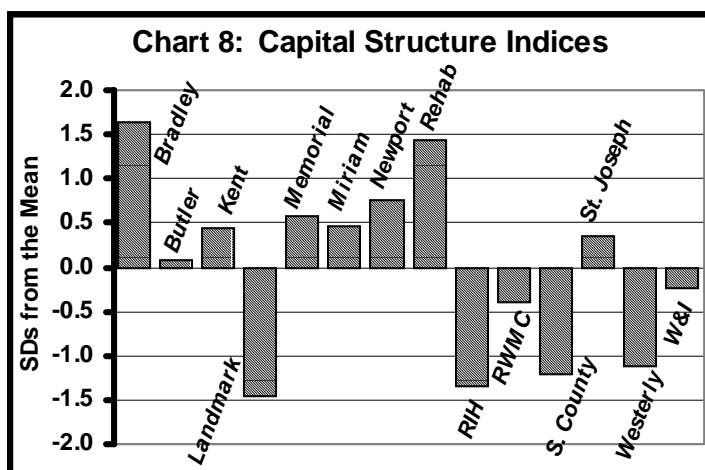
-9- Multiple of how many times cash flow can pay off the interest & principal payment on the debt -higher values are preferred

*Debt to Capitalization* measures the importance of debt in the hospital's permanent capital structure. Lower values are preferred because they indicate less financial leverage (i.e., less reliance on borrowing). RI hospitals were positively positioned below both the regional and national hospitals on this measure. However, low *Debt to Capitalization* values do not guarantee an ability to borrow additional monies under favorable terms, but rather, indicate the historical mix of financing. The amount of debt on the books is less important than the ability to repay same, which is a function of profitability. Unfortunately, RI's profitability suffers in comparison to hospitals elsewhere (*Total Margins*, above).

*Capital Expense Ratios* assess the burden of the actual capital related expenses (i.e., interest and depreciation) relative to the total expenses. Lower values are favored because these expenses are considered fixed from the standpoint they are long-lived and do not vary with volume. RI hospitals have historically had lower *Capital Expense Ratios* than their national or regional counterparts. This is due to two factors, less relative debt (i.e., less interest expense) as evidenced by the low *Debt to Capitalization* values, and smaller physical plants (i.e., less depreciation expense) as suggested by the high *Fixed Asset Turnovers* (below). The relative age of the hospital facility may also affect this measure. Older plants tend to favorably decrease the *Capital Expense Ratio* because of lower depreciation expenses. This was the case in RI, as its facilities were slightly older (10.4 years) than those across the country (10.1 years) or in the Northeast (9.5 years) in 2001.

*Debt Service Coverage* is the single most important capital structure ratio, equating the available cash to the principal and interest obligation on the debt. Higher values are preferred. Locally, this measure improved to match the Northeast experience in 2000, but it has since declined below both benchmarks. The reason for this unfavorable performance was not a higher debt load in RI, but lower profitability that weakened cash-flow. Mortgage lenders use this ratio to examine the security of the debt, because it examines both a source and a use of revenue. A large *Debt Service Coverage* value does not always guarantee adequate repayment ability if the cash flows are predicated on a dependence on non-operating funds. These funds are usually beyond the control of the hospital, therefore, reliance on them represents added uncertainty and risk.

The top three hospitals for capital structure were: **Bradley**, **Rehab Hospital** and **Newport**, respectively (Chart 8). Bradley had no long term debt and the 2<sup>nd</sup> lowest capital expenses in the state. Rehab Hospital had the 2<sup>nd</sup> smallest debt burden and the lowest capital expenses, while Newport had the 5<sup>th</sup> smallest debt burden and the strongest ability to service its debt in the state. The bottom three hospitals for capital structure were: **Landmark**, **RIH** and **South County**, respectively.



## VI. Asset Efficiency

**Asset Efficiency** refers to how productively a hospital uses its assets to generate revenue. Hospital revenue consists mostly of patient reimbursement (91 percent in 2001) and some other minor sources (e.g., fundraising, investment returns, etc.). Therefore, the numerator in these ratios is a proxy for output (i.e., services provided) and the denominator is a measure of input (i.e., the investment in some category of assets). Three asset efficiency measures are examined: *Total Asset Turnover*, *Fixed Asset Turnover*, and *Current Asset Turnover* (Table 4).

**TABLE 4: ASSET EFFICIENCY MEASURES**

	<b>-10- Total Asset Turnover</b>				<b>-11- Fixed Asset Turnover</b>				<b>-12- Current Asset Turnover</b>			
	'98	'99	'00	'01	'98	'99	'00	'01	'98	'99	'00	'01
Bradley	\$0.53	\$0.52	\$0.56	\$0.65	\$8.19	\$7.82	\$8.98	\$9.18	\$3.71	\$3.00	\$4.10	\$3.52
Butler	\$0.80	\$0.92	\$0.89	\$0.90	\$3.12	\$3.43	\$3.52	\$3.34	\$2.32	\$3.14	\$3.04	\$2.74
Kent	\$1.16	\$1.13	\$1.07	\$1.21	\$3.78	\$3.67	\$3.89	\$4.22	\$4.31	\$3.92	\$3.41	\$3.40
Landmark	\$1.19	\$1.13	\$1.30	\$1.49	\$3.84	\$3.13	\$3.32	\$3.19	\$2.69	\$2.73	\$2.48	\$3.39
Memorial	\$1.07	\$1.05	\$1.00	\$1.10	\$3.81	\$3.81	\$4.22	\$3.78	\$3.65	\$3.85	\$3.30	\$3.38
Miriam	\$1.01	\$1.01	\$0.98	\$1.17	\$2.90	\$3.13	\$3.38	\$3.99	\$3.38	\$2.95	\$2.96	\$3.82
Newport	\$0.33	\$0.27	\$0.29	\$0.33	\$1.72	\$1.35	\$1.04	\$1.06	\$4.28	\$4.01	\$4.57	\$5.30
Rehab Hospital	\$1.46	\$1.28	\$3.48	\$4.20	\$9.24	\$8.82	\$61.84	\$63.17	\$3.02	\$2.61	\$4.09	\$4.82
RIH	\$0.54	\$0.55	\$0.57	\$0.73	\$1.90	\$2.02	\$2.16	\$2.08	\$3.98	\$3.69	\$3.82	\$4.56
Roger Williams	\$0.99	\$0.97	\$1.10	\$1.24	\$3.02	\$2.96	\$3.13	\$3.05	\$3.31	\$2.47	\$3.23	\$3.94
South County	\$1.05	\$1.05	\$1.03	\$1.21	\$2.78	\$2.52	\$2.35	\$2.52	\$2.48	\$2.48	\$2.55	\$2.69
St. Joseph	\$1.85	\$1.37	\$1.41	\$1.57	\$5.20	\$4.50	\$4.24	\$4.03	\$3.52	\$2.96	\$2.97	\$3.60
Westerly	\$0.59	\$0.57	\$0.58	\$0.66	\$1.47	\$1.52	\$1.52	\$1.58	\$4.20	\$4.24	\$4.68	\$5.26
W&I	\$1.01	\$1.06	\$1.07	\$1.17	\$3.30	\$3.54	\$4.01	\$4.04	\$3.68	\$3.71	\$3.14	\$3.37
<b>Rhode Island:</b>	<b>\$0.77</b>	<b>\$0.75</b>	<b>\$0.77</b>	<b>\$0.91</b>	<b>\$2.66</b>	<b>\$2.67</b>	<b>\$2.74</b>	<b>\$2.74</b>	<b>\$3.57</b>	<b>\$3.33</b>	<b>\$3.34</b>	<b>\$3.82</b>
<b>Northeast:</b>	<b>\$0.94</b>	<b>\$0.93</b>	<b>\$0.95</b>	<b>\$0.97</b>	<b>\$2.32</b>	<b>\$2.26</b>	<b>\$2.35</b>	<b>\$2.52</b>	<b>\$3.59</b>	<b>\$3.53</b>	<b>\$3.53</b>	<b>\$3.55</b>
<b>United States:</b>	<b>\$0.94</b>	<b>\$0.93</b>	<b>\$0.96</b>	<b>\$1.01</b>	<b>\$2.19</b>	<b>\$2.16</b>	<b>\$2.24</b>	<b>\$2.30</b>	<b>\$3.51</b>	<b>\$3.42</b>	<b>\$3.46</b>	<b>\$3.55</b>

-10- Amount of revenue generated from each dollar invested in total assets -higher values are preferred

-11- Amount of revenue generated from each dollar invested in property, plant & equipment -higher values are preferred

-12- Amount of revenue generated from each dollar invested in total assets -higher values are preferred

The *Total Asset Turnover* is the consummate asset efficiency measure. It analyzes the productivity of the entire asset base. Higher ratio values are preferred and may reflect superior reimbursement, greater utilization, better investment returns, a more favorable mix of assets, or any combination thereof (all else being equal). RI's performance lagged both the national and regional experience, however, there was marked improvement in 2001. As noted earlier (*Total Margin* above), RI's relatively low reimbursement rates contributed to this situation (at least in 1999). In addition, new financial accounting for 2001, not yet reflected in the benchmark data, tended to understate RI's comparative performance for 1998 to 2000.<sup>6</sup> For this reason, 2001 provides the most accurate picture of RI's performance relative to hospitals elsewhere.

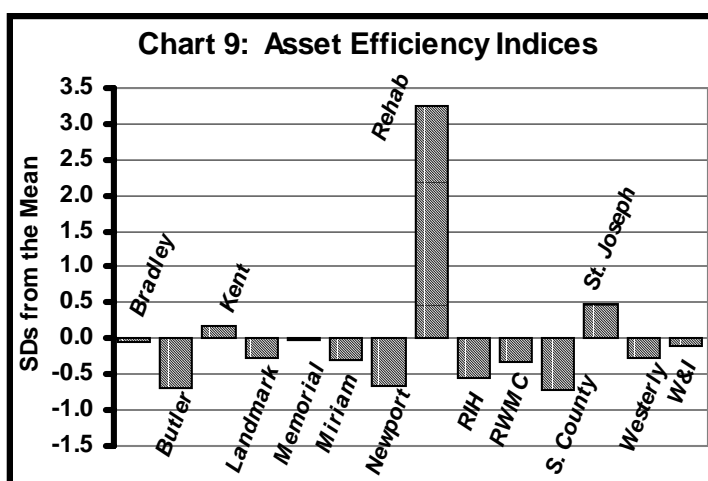
The *Fixed Asset Turnover* measures the number of dollars generated from each dollar invested in property, plant and equipment. Again, higher values are preferred. RI values were consistently above both the regional and national amounts. The importance in maintaining a high *Fixed Asset Turnover* is that these investments are essentially constant (independent of patient volume), long-lived (useful lives to 30 years), and, for most part,

<sup>6</sup> Statement of Financial Accounting Standards (SFAS) 136 essentially states that net assets (i.e., investments) held in a related Foundation must now be reported in the Balance Sheet of a hospital. RI's Total Assets for 1998-2000 were restated to comply w/SFAS136, regional and national values were not restated.

illiquid (not easily sold or converted to other uses). This measure, along with the *Capital Expense Ratio*, favors older facilities (i.e., because of understated historical book values). As previously stated, local hospitals were slightly older than their national and regional counterparts.

The *Current Asset Turnover* measures the revenue generated per dollar of investment in current assets. Current accounts include items such as receivables, inventories, prepaid expenses, notes or other liquid assets. Ideally, current accounts should be minimized to the point where internal funding of operations is maintained (i.e., short-term borrowing for working capital is not needed). The *Current Asset Turnover* is unaffected by the age of the plant and RI hospitals improved their performance to exceed the national and regional values.

The top three hospitals for asset efficiency were: **Rehab Hospital**, **St. Joseph**, and **Kent**, respectively (Chart 9). Rehab Hospital had the highest revenue generation from its total and fixed assets, and the 4<sup>th</sup> highest revenue generation from its current assets. St. Joseph had the 2<sup>nd</sup> highest revenue generation from its total assets, the 3<sup>rd</sup> highest generation from its fixed assets. Kent had the 4<sup>th</sup> highest revenue generation from its total and fixed assets, and the 5<sup>th</sup> highest revenue generation from its current assets. The bottom three hospitals for asset efficiency were: **South County**, **Butler**, and **Newport**, respectively.





## **Appendix -Methods**

For each facility, 12 measures were calculated and grouped into four categories: **profitability** (the generation of net income), **liquidity** (the ability to pay one's bills), **capital structure** (the capacity for debt financing), and **asset efficiency** (the productivity of the assets). Statewide values were then compared to the corresponding national and Northeastern<sup>7</sup> values to evaluate hospital performance locally.

Any number of financial ratios may be calculated, however, three criteria were used in selecting the 12 individual measures here. First, they had to be derived from audited data. Second, national and regional benchmarks had to be available. Third, they had to be widely used and recognized both within and out of the industry as key indicators of operating performance. Each one had to provide the most utility. For example, *Times Interest Earned* and *Debt Service Coverage* are two (out of 10<sup>+</sup>) capital structure ratios. They roughly measure the same thing (i.e., debt repayment) with some important differences. *Debt Service Coverage* considers the entire debt obligation (i.e., interest plus principal) and all available cash (i.e., cash-flow rather than accounting income). In addition, *Debt Service Coverage* is the primary capital structure ratio used by bond rating agencies to assess hospital credit. Therefore, for these reasons it was chosen for inclusion in this Report.

Individual hospital performance was assessed by developing four indexes corresponding to the four ratio categories. To accomplish this, the individual ratios were standardized,<sup>8</sup> a weighted average for all ratios (and all four years) in each category was calculated, and these weighted averages were again standardized to yield a performance index. Higher values on an index indicate superior performance. To interpret any of the standardized indices, one concludes that the index value is so many standard deviations from the mean (i.e., the average for all hospitals). For example, Landmark's liquidity index is 1.9, or almost 2 standard deviations above the state average. In a 'normal' distribution, approximately 66 percent of the population is within +/-1 standard deviation, and 95 percent is within +/-2 standard deviations (of the mean). This puts Landmark at the top of the state in this measure, and examination of all other hospital liquidity indices bears this out. In those cases where the desired trend for an individual ratio is for lower values (i.e., *Days in Patient Accounts Receivable*, *Debt to Capitalization*, and *Capital Expense Ratio*), the inverse of the standardized values was taken.<sup>9</sup> Relative weights given to yearly performance are 19 percent, 23 percent, 27 percent, and 31 percent for years 1998 through 2001, respectively. Therefore, and logically, a hospital's most recent performance is considered more important than how it operated in prior years.

Weights given to the individual **profitability** measures are 30 percent for *Total Margin*, 30 percent for *Return on Equity*, and 40 percent for *Equity Growth Rate*. *Total Margin* and *Return on Equity* are equally important measures of primary operating profitability and are given a combined weight of 60 percent to reflect this. The *Equity Growth Rate*, which may be

<sup>7</sup> Includes Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and New York

<sup>8</sup> i.e., ((individual hospital value – mean of all hospitals' values) / standard deviation of all hospitals' values), standardization enables disparate information to be compared in a statistically valid fashion regardless of differences in scale

<sup>9</sup> To preserve larger comparative values as the desired trend

influenced by outside factors (e.g., a financial market downturn, an accounting change in recording assets), is rated less important.

Weights given to the **liquidity** measures are 45 percent for *Days Cash on Hand*, and 55 percent for *Days in Patient Accounts Receivable*. The *Average Payment Period* is not included in the mix because there is no preferred direction for this measure (i.e., neither higher nor lower values are favored as long as cash-flow is in 'balance'). *Days Cash on Hand* is weighted less heavily because it is a conceptual measure of liquidity and it may be improved with the simple reallocation of investments into shorter positions. *Days in Patient Accounts Receivable*, however, is a material liquidity statistic and is weighted higher because effective management of these accounts is essential for working capital.

Weights given to the individual **capital structure** ratios are 25 percent for *Debt to Capitalization*, 35 percent for *Capital Expense Ratio*, and 40 percent for *Debt Service Coverage*. *Debt to Capitalization* is rated least important because it measures the amount of, but not the cost of the debt. The *Capital Expense Ratio* considers the actual fixed costs of the financing and depreciation, and is rated next in importance. The *Debt Service Coverage* calculates the ability to repay the debt obligation from cash-flow so it is rated most important.

Weights given to the **asset efficiency** measures are 40 percent for *Total Asset Turnover*, 35 percent for *Fixed Asset Turnover*, and 25 percent for *Current Asset Turnover*. The *Total Asset Turnover* is weighted most heavily because it includes all assets under control of the hospital. The *Fixed Asset Turnover* is derivative of the *Total Asset Turnover*, but it is weighted next in importance because these are long-lived hard assets, not easily converted to other purposes. The *Current Asset Turnover*, is rated least important because less investment is tied up in them<sup>10</sup> and they are, by definition, liquid.

To determine overall financial performance, the indexes in the four ratio categories are weighted 40 percent for **profitability**, 20 percent for **liquidity**, 20 percent for **capital structure**, and 20 percent for **asset efficiency**. Those weighted averages are then standardized to arrive at a single overall performance index for each hospital. Again, higher values are preferred. Profitability is rated most important because all other measures pale in significance. Hospitals that consistently lose money and value will not survive. It doesn't matter how low the debt burden, how strong the liquidity, or how efficiently the assets are used, an unprofitable hospital is fated for failure. The three other ratio categories are rated equal in importance, at 20 percent each

<sup>10</sup> Hospital current assets were \$469m, net fixed assets were \$655m, and total assets were \$1,978m in 2001